

CLMPTO 10/14/04 JW

Cancel Claims 1-19

Add New Claims 20-38

20. (New) An active reflector for use in indoor wireless data communication systems, comprising:
- receiving means for receiving signals from a first mobile terminal; and
 - transmitting means for transmitting the received signals to a second mobile terminal in an omni-directional way for direct communication with high data rates between mobile terminals in an indoor environment;
 - wherein the active reflector is mounted above the first and second mobile terminals in the indoor environment to provide for an indirect line-of-sight connection between the active reflector and each mobile terminal; and
 - wherein the active reflector does not comprise a signal processing unit and does not influence the logical setup of the indoor wireless data communication system.
21. (New) The active reflector according to claim 20, further comprising signal processing means between said receiving means and said transmitting means for processing received signals.

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22. (New) The active reflector according to claim 21, wherein the signal processing means comprises at least one gain block between the receiving means and the transmitting means.

23. (New) The active reflector according to claim 22, wherein the gain block comprises more than one sub-gain block, wherein at least one of the sub-gain blocks can be switched off.

24. (New) The active reflector according to claim 21, further comprising digital filtering means for filtering the received signals or the received and amplified signals.

25. (New) The active reflector according to claim 20, further comprising one common unit each connected to the receiving means and the transmitting means.

26. (New) The active reflector according to claim 20, further comprising a first antenna connected to receiving means R₁ and a second antenna connected to transmitting means T₂.

27. (New) The active reflector according to claim 26, wherein the first and the second antennas have a uniform coverage pattern.

28. (New) The active reflector according to claim 26, wherein the first and the second antennas are circular polarized antennas with the same polarization direction.

29. (New) The active reflector according to claim 26, wherein the first and the second antennas are antennas with different types of linear polarization.

30. (New) The active reflector according to claim 21, wherein said signal processing means comprise frequency translating means for changing the received signal frequency to another frequency, and transmitting the signal at the changed frequency to the first and second mobile terminals.

31. (New) The active reflector according to claim 20, further comprising communication means for communicating data with at least one further active reflector.

32. (New) The active reflector according to claim 20, wherein power for the active reflector is supplied by a power grid or an induct loop.

33. (New) The active reflector according to claim 20, wherein the active reflector is integrated into a lamp.

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34. (New) A wireless data communication system for direct communication between mobile terminals in an indoor environment at least one active reflector, comprising:

receiving means for receiving signals from a first mobile terminal; and transmitting means for transmitting the received signals to a second mobile terminal in an expedient way for a direct communication with high data rates between mobile terminals in an indoor environment;
wherein the active reflector is situated above the first and second mobile terminals in the indoor environment to provide for an indirect line-of-sight connection between the active reflector and mobile terminal; and
wherein the active reflector does not comprise a bandpass filtering and does not influence the logical set-up of the indoor wireless data communication system.

35. (New) The wireless direct data communication system according to claim 34, further comprising, wherein connected to the transducers of said first and second mobile terminals.

36. (New) The wireless direct data communication system according to claim 33, wherein the antennas of the transducers of the mobile terminals are high gain antennas.

37. (New) The wireless direct data communication system according to claim 34, further comprising at least one further active reflector.

38. (New) The wireless direct data communication system according to claim 34, further comprising at least two active reflectors comprising antennas for communicating signals from and to a first active reflector to and from a second active reflector.

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